

## GEOLOGICAL SURVEY OF OREGON AND WASHINGTON.

JANUARY 31, 1857.

MR. THORINGTON, from the Committee on Public Lands, made the following

### REPORT.

[To accompany bill H. R. No. 800.]

*The Committee on Public Lands made the following report in reference to the general geological reconnaissance of Oregon and Washington Territories, completed, which was submitted to said committee for consideration.*

In addition to the explorations in these Territories, examinations and collections of rocks, soils, and minerals have been made along previously unexplored routes to the Pacific, including an examination of the northern passes in the Rocky mountains. These passes were explored by Dr. John Evans, in 1850-'51, and a good wagon route across the main range discovered; also several important discoveries in relation to the courses of rivers, incorrectly laid down on previously published maps, and the value of their bottom lands for agricultural purposes, or an emigrant route; an exploration of the main range of the Rocky mountains, from latitude 45° north to the "British line," not following the Indian trails, but travelling by the compass; three trips in Oregon and Washington Territories, by different routes, from the boundary of California to the British possessions on the north, one east and two west of the Cascade mountains; three crossings of the coast range of mountains, in different latitudes; explorations in the northern ranges of spurs, intermediate between the main ranges of the Rocky and Cascade ranges of mountains. These explorations involve the crossing of eleven ranges of mountains, and the travel on foot or on horseback of 12,000 miles, with numerous lateral excursions, involving perhaps an equal distance.

Along these routes, specimens of the prevailing rocks, coals, soils, and ores have been collected for analysis, serving to develop the mineral and agricultural resources of the country; and generally barometrical measurements, made for the purpose of constructing geological sections of the country.

These journeys overland to the Pacific, and explorations in the mountain ranges and valleys of Oregon and Washington Territories, have not been made along highways or even Indian trails, but in the pathless prairies and the fastnesses of rugged mountain ranges, covered for the most part by dense forests, many of them previously untrodden by the foot of the white man, without guides or military escort for safety, and the transportation of supplies for comfort and convenience, but with two or three voyageurs, and a compass for a guide, in order to make the appropriations by Congress for this extensive and interesting field of labor go as far as possible in developing the resources of the country and adding to the scientific knowledge of this interesting region.

One great result of the survey has been to develop rich coal fields of semi-bituminous coal, suitable for all purposes, except sea-going steamers on long voyages. These coals crop out at various places from the British line to near Port Orford; and are in almost inexhaustible quantities. The existence of lead "in place," has been discovered, and other valuable ores; also "a bed," or stratum, of pure limestone, which previously it was supposed could not be found in Oregon. Gold has also been found in several localities in Washington Territory, as well as in Oregon; which proves, on examination of the geology of the country, to be in true gold-bearing regions.

Owing to the Indian war in those Territories, more than doubling the cost of supplies, &c., and the means of transportation, the necessary expenses have somewhat exceeded the estimate and appropriation by Congress. The following is a statement of the deficiency, and the sum necessary to complete the illustrations, and the cost of publishing the report, maps, &c.

Vouchers rendered to the department	-	\$16,065 87
Appropriation by Congress for the survey	-	13,000 00
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Balance due me	- - -	3,065 87
For the completion of the analysis and preparation of the report for publication	- -	2,700 00
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		5,765 87
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A careful estimate of the cost of publication, including geological sections of the country passed over, landscape views of scenery on changes of geological formations, general map, drawings of organic fossil remains, of which a very rich collection has been made; printing, binding, &c., &c., amounts to \$15,300. Detailed estimates of which have been submitted to the department.\* This estimate will publish the work in the style of Dr. Owens' Geological Report. For the reasons aforesaid your committee recommend the passage of the accompanying bill.

\* The letter from the Commissioner of the General Land Office, dated January 17, 1857, to Hon. J. Patton Anderson, is herewith submitted as a part of this report, as exhibiting the view taken of this subject by this department of the general government.

GENERAL LAND OFFICE,  
January 17, 1857.

SIR: I have the honor to acknowledge the receipt of your letter of the 16th instant, calling for information as to the amount of appropriation necessary to publish the report of Dr. John Evans, United States geologist for the Territories of Oregon and Washington, so that it may be available to the public interest, and to communicate any other information in connexion with Dr. Evans' survey as I may think it necessary.

In reply, I have the honor to state that, from the report of Dr. Evans to this office, bearing date the 28th November last, it appears that the appropriations heretofore made for geological surveys, and completion thereof, in Oregon and Washington Territories, have been exceeded by actual expenditure by \$3,065 87, to cover which liabilities, as well as the additional sum of \$2,700, estimated by the geologist as the expenses which are being incurred in the completion of the analysis of minerals, coals, and earths, and the preparation of his report for publication, it will require an appropriation of \$6,000; to which must be added an estimated expense for the publication of his final report on the geology of Oregon and Washington, (upon the supposition of 5,000 copies in quarto form, and in the same style of execution as the geological report of Dr. D. D. Owen, the extent of Dr. Evans' report being one half that of Dr. Owens',) the sum of \$15,400.

With the view of providing the requisite means to defray the foregoing expenses, incurred, and to be incurred if sanctioned by Congress, the following estimates would be necessary:

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| 1. For defraying the expenses incurred in making the geological reconnaissance in Oregon and Washington Territories, over and above the appropriations of March 3, 1853, and 1855, and for the completion of the analysis, and for the preparation of the final report of Dr. John Evans, the geologist, for publication..... | \$6,000 |
| 2. For publishing 5,000 copies of the geological report of Dr. Evans, the geologist of Oregon and Washington Territories, in quarto form, under the direction of the Commissioner of the General Land Office, and under the immediate supervision of the geologist.....   | 15,400  |

The report of Dr. Evans discloses the results of his reconnaissance and explorations, during four years and a half, highly favorable; rich coal fields of semi-bituminous coal have been found in various places on Puget Sound, at Coose bay, and other navigable waters, and in other inland places, of an inexhaustible extent; he has also discovered on a large tributary of the Columbia river mountains of limestone, marble, gypsum, &c.

The services rendered by the geologist to the country, in the exploration of vast ranges of Oregon and Washington Territories, and some of their localities, hitherto unvisited by scientific explorers, have been highly commended by repeated legislative resolutions in Oregon

and Washington Territories, and greatly appreciated by persons engaged in commercial, agricultural, and mining pursuits, who have urged the importance of geological explorations by Dr. Evans; and, considering his labors eminently useful in a scientific point of view, as well as of subserving the interest of the Pacific shore, by indicating the localities of the country possessing mineral and agricultural wealth to our enterprising citizens, whose commendations of Dr. Evans' explorations, in the opinion of this office, are worthy of the approbation and fostering care of the government.

The upshot of the matter is briefly this: Either what has been done in the way of exploration and development of coal deposits under appropriations by Congress is to go for nothing, and remain useless, or be brought to light in proper form, as proposed by further appropriation, to close the business, and make the results available.

The effect of the latter measure will be to open up new sources of trade to active industry in the extraction and sale of coal on the Pacific; thereby furnishing the material for propulsion, essential in our rapidly growing steam commerce on the Pacific, at cheap rates, instead of the enormous cost of the articles imported from the east.

Even in this respect the measure will contribute eminently to the advantage of that distant portion of our territory, whilst it will subserve the interest of the whole country.

I am, with great respect, your obedient servant,

THOS. A. HENDRICKS,  
*Commissioner.*

HON. J. PATTON ANDERSON,  
*House of Representatives.*